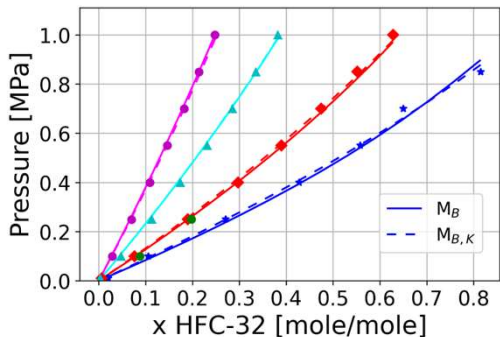


**Experimental
Design**



**Laboratory
Data**

$$P = \frac{RT}{V-b} - \frac{a}{V^2 - ubV + wb^2}$$

$$a_m = \sum_i \sum_j y_i y_j \sqrt{a_i a_j} (1 - \kappa_{ij})$$

$$a_j = 0.421875 \frac{R^2 T_{Cj}^2}{P_{Cj}} \alpha_j$$

$$b_j = 0.125 \frac{RT_{Cj}}{P_{Cj}}$$

$$b_m \sum_{i=1}^N x_i = 1$$

**Thermodynamic
Modeling**

**Rapid IL
Screening**